

Patent Claims:

1. Power steering system,
c h a r a c t e r i z e d in that the power steering system includes a means for actively applying an additional steering torque as well as a means for actively applying a superposition steering angle.
2. Power steering system as claimed in claim 1,
c h a r a c t e r i z e d in that the means for actively applying an additional steering torque is a functionally self-contained and independently manageable subassembly, and in that the means for actively applying a superposition steering angle is a functionally self-contained and independently manageable subassembly.
3. Power steering system as claimed in claim 1 or 2,
c h a r a c t e r i z e d in that the means for actively applying an additional steering torque causes generation of an antitorque, which compensates, at least in part, any superposition torque generated by the means for actively applying a superposition steering angle.
4. Power steering system as claimed in any one of claims 1 to 3,
c h a r a c t e r i z e d in that a detection of the driver's activity is performed by actuating the means for actively applying an additional steering torque and by actuating the means for actively applying a superposition steering angle.

5. Power steering system as claimed in any one of claims 1 to 4,

c h a r a c t e r i z e d in that a selection unit is used to select a sole actuation of the means for actively applying an additional steering torque, a sole actuation of the means for actively applying a superposition steering angle, or a combined actuation of the means for actively applying an additional steering torque and the means for actively applying a superposition steering angle.

6. Power steering system as claimed in any one of claims 1 to 5,

c h a r a c t e r i z e d in that autonomous driving, especially an independent parking maneuver, is performed by an actuation of the means for actively applying an additional steering torque and an actuation of the means for actively applying a superposition steering angle.

7. Power steering system as claimed in any one of claims 1 to 6,

c h a r a c t e r i z e d in that the means for actively applying an additional steering torque includes an additional-torque actuator, an electronic regulating and controlling unit (ECU I), and a preferably redundant steering torque sensor.

8. Power steering system as claimed in any one of claims 1 to 7,

c h a r a c t e r i z e d in that the means for actively applying a superposition angle includes a superposition

actuator, an electronic regulating and controlling unit (ECU II) and two preferably redundant sensors for determining the angle of rotation.

9. Power steering system as claimed in any one of claims 1 to 8,

c h a r a c t e r i z e d in that the means for actively applying an additional steering torque and the means for actively applying a superposition steering angle generates an additional steering wheel torque that is adapted to the vehicle's course and the shape of a road, as well as an adapted superposition angle.

10. Power steering system as claimed in any one of claims 1 to 9,

c h a r a c t e r i z e d in that the means for actively applying an additional steering torque and the means for actively applying a superposition steering angle generates an additional steering wheel torque, which is adapted to the current vehicle dynamics, especially the current lateral acceleration, as well as an adapted superposition angle.

11. Method for assisting a driver,

c h a r a c t e r i z e d in that an additional steering torque can be applied actively and, additionally, a superposition steering angle can be applied actively.